

IN THE CLAIMS:

1. (currently amended) A method for providing an optical head in a read/write device comprising:

positioning a light source with respect to an optical head substrate;

positioning at least a first optical element along an optical path from said light source to an objective, said optical path defines at least a farthest virtual source point; and

providing at least a first beamshaper in said optical path wherein a farthest virtual source point of said optical path after said first beamshaper is provided is substantially the same as said farthest virtual source point before said first beamshaper is provided.

2. (Original) A method as claimed in claim 1 wherein said beamshaper and said first optical element are positioned on a single integral optical element unit.

3. (Original) A method, as claimed in claim 1 wherein said first optical element is a non-beamshaper element.

4. (Withdrawn) A method for forming an optical element comprising:
providing a first optical substrate;
positioning at least a first photomask on a first surface of said optical substrate;
etching at least a portion of said first surface to provide a first surface of said optical element:

measuring said first surface of said optical element to determine errors in said first surface of said optical element;

forming a second surface of said optical element in a second surface of said optical substrate, substantially aligned with said first surface of said optical element, wherein said second surface of said optical element is configured to at least partially compensate for said errors determined as a result of said measuring.

5. (Withdrawn) A method, as claimed in claim 4, wherein said step of forming a second surface is performed by an etching process.

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6. (Withdrawn) A method as claimed in claim 4 wherein said errors include errors in the shape of said first surface of said optical element.

7. (Withdrawn) A method as claimed in claim 4 wherein said errors include errors in the position of said first surface of said optical element.

8. (currently amended) Optical head apparatus for use in a read/write device comprising:

an optical head substrate;

a light source positioned with respect to said optical head substrate;

a first optical element positioned along an optical path from said light source to an objective; and

a ~~second optical element beamshaper~~ in said optical path, wherein a ~~first optical parameter a virtual source point~~ of said optical path when said ~~second optical element beamshaper~~ is provided is substantially the same as said ~~first optical parameter virtual source point~~ before said second optical element is provided.

9. (Cancelled)

10. (Cancelled)

11 (currently amended) Apparatus as claimed in claim 9 ~~8~~ wherein said beamshaper and said first optical element are positioned on a single integral optical element unit.

12. (currently amended) Apparatus, as claimed in claim 8 ~~claim 1~~ wherein said first optical element is a non-beamshaper element.

13. (withdrawn) Apparatus, for forming an optical element comprising:

a first optical substrate;

a first surface of said optical element formed on said optical substrate by etching at least a portion of said first surface using at least a first photomask;

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an optical surface measurement device which measures said first surface of said optical element to determine errors in said first surface of said optical element; and
a second photomask, formed on a second surface of said optical substrate and configured for use in etching a second surface of said optical element, substantially aligned with said first surface of said optical element, wherein said second surface of said optical element is configured to at least partially compensate for said errors determined as a result of said measuring.

14. (Withdrawn) Apparatus as claimed in claim 13 wherein said errors include errors in the shape of said first surface of said optical element.

15. (Withdrawn) Apparatus as claimed in claim 13 wherein said errors include errors in the position of said first surface of said optical element.

16. (currently amended) Optical head apparatus for use in a read/write device comprising:

an optical head substrate;

a light source means for outputting light, positioned with respect to said optical head substrate;

a first optical means for modifying said light, positioned along an optical path from said light source means to an objective means; and

~~a second optical means~~ beamshaper for modifying said light, said ~~second optical means~~ beamshaper positioned in said optical path, wherein a value of a ~~first optical parameter~~ virtual source point of said optical path when said ~~second optical means~~ beamshaper is provided is substantially the same as a value of said ~~first optical parameter~~ virtual source point before said ~~second optical means~~ beamshaper is provided.

17. (cancelled)

18. (cancelled)

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19. (currently amended) Apparatus as claimed in claim 16 wherein said first optical means and said ~~second optical means~~ beamshaper are positioned on a single integral optical element unit.

20. (Original) Apparatus, as claimed in claim 16 wherein said first optical means is a non-beamshaper element.

21. (Withdrawn) Apparatus, for forming an optical element comprising:
a first optical substrate;
means for positioning at least a first photomask on a first surface of said optical substrate;
means for etching at least a portion of said first surface to provide a first surface of said optical element;
means for measuring said first surface of said optical element to determine errors in said first surface of said optical element;
means for forming a second surface of said optical element in a second surface of said optical substrate, substantially aligned with said first surface of said optical element, wherein said second surface of said optical element is configured to at least partially compensate for said error determined as a result of said measuring.

22. (Withdrawn) Apparatus, as claimed in claim 21, wherein said means for forming a second surface comprises means for forming by an etching process.

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